

FIG. 1

VIRUS	MOI	YIELD (PFU//ML) <sup>a</sup>	
		VERO	S2
ICP8-GFP	3	$9.8 \times 10^4$	$1.5 \times 10^8$
KOS 1.1	3	$8.8 \times 10^8$	$8.5 \times 10^8$
ICP8-GFP	20	$4.6 \times 10^5$	$6.6 \times 10^7$
KOS 1.1	20	$6.8 \times 10^8$	$7.7 \times 10^8$

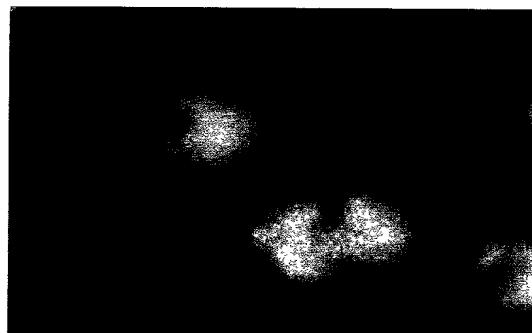
<sup>a</sup> Determined by plaque assay on S2 cells

FIG. 2

**FIG. 3A**



**FIG. 3B**



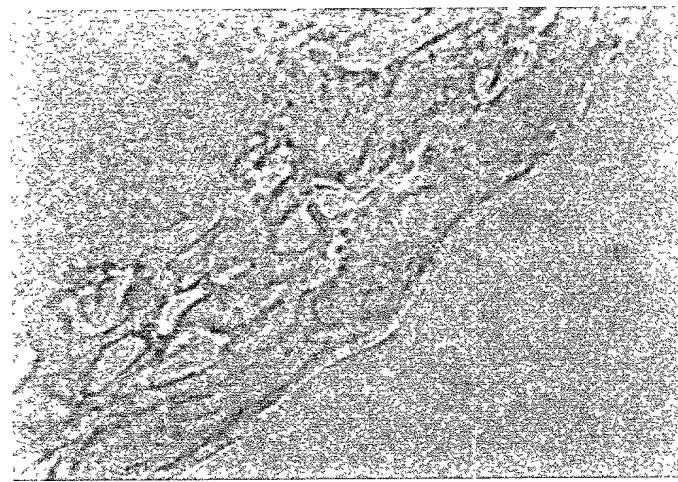
**FIG. 3C**



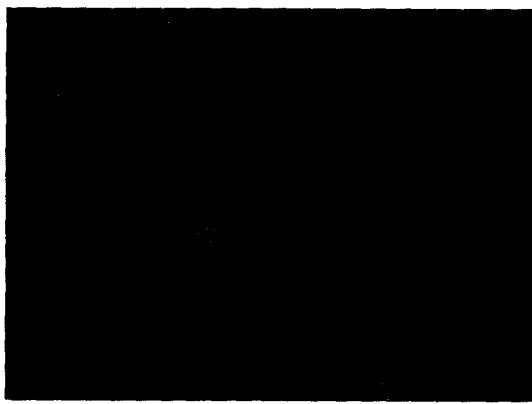
**FIG. 4A**



**FIG. 4B**



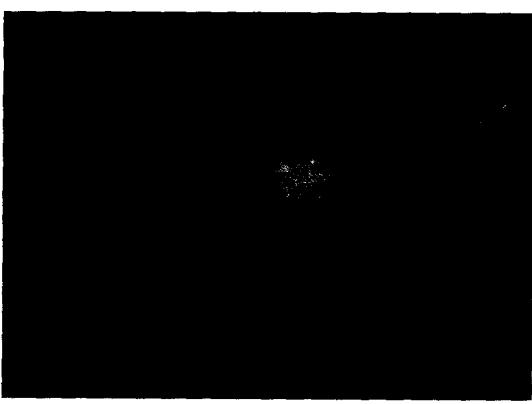
**FIG. 5A**



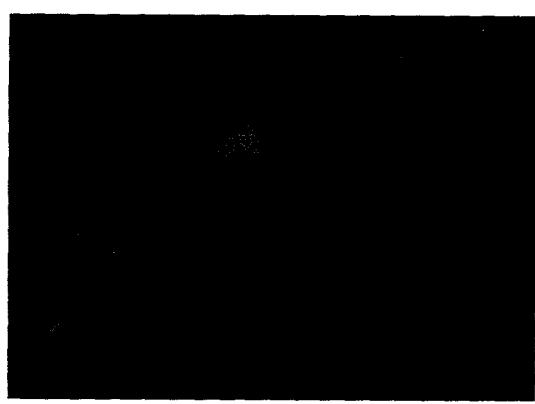
**FIG. 5B**



**FIG. 5C**



**FIG. 5D**



atg gag aca aag ccc aag acg gca acc acc atc aag gtc ccc ccc ggg 48  
ccc ctg gga tac gtg tac gct cgc gcg tgt ccg tcc gaa ggc atc gag 96  
ctt ctg gcg tta ctg tcg gcg cgc agc ggc gat gcc gac gtc gcc gtg 144  
gcg ccc ctg gtc gtg ggc ctg acc gtg gag agc ggc ttt gag gcc aac 192  
gta gcc gtg gtc gtg ggt tct cgc acg acg ggg ctc ggg ggt acc gcg 240  
gtg tcc ctg aaa ctg acg cca tcg cac tac agc tcg tcc gtg tac gtc 288  
ttt cac ggc ggc cgg cac ctg gac ccc agc acc cag gcc cca aac ctg 336  
acg cga ctc tgc gag cgg gca cgc cgc cat ttt ggc ttt tcg gac tac 384  
acc ccc cgg ccc ggc gac ctc aaa cac gag acg acg ggg gag gcg ctg 432  
tgt gag cgc ctc ggc ctg gac ccg gac cgc gcc ctc ctg tat ctg gtc 480  
gtt acc gag ggc ttc aag gag gcc gtg tgc atc aac aac acc ttt ctg 528  
cac ctg gga ggc tcg gac aag gta acc ata ggc ggg gcg gag gtg cac 576  
cgc ata ccc gtg tat ccg ttg cag ctg ttc atg ccg gat ttt agc cgg 624  
gtc atc gcc gag ccg ttc aac gcc aac cac cga tcg atc ggg gag aat 672  
ttt acc tac ccg ctt ccg ttt ttt aac cgc ccc ctc aac cgc ctc ctg 720  
ttc gag gcg gtc gtg gga ccc gcc ggc gtg gca ctg cga tgc cga aac 768  
gtg gac gcc gtg gcc cgc gcg gcc cac ctg gcg ttt gac gaa aac 816  
cac gag ggc gcc gcc ctc ccc gcc gac att acg ttc acg gcc ttc gaa 864  
gcc agc cag ggt aag acc ccg cgg ggt ggg cgc gac ggc ggc ggc aag 912  
ggc ccg cgc ggc ggg ttc gaa cag cgc ctg gcc tcc gtc atg gcc gga 960  
gac gcc gcc ctg gcc ctc gag tct atc gtg tcg atg gcc gtc ttc gac 1008  
gag ccg ccc acc gac atc tcc gcg tgg ccg ctg tgc gag ggc cag gac 1056  
acg gcc gcg gcc cgc gcc aac gcc gtc ggg gcg tac ctg gcg cgc gcc 1104  
gcg gga ctc gtg ggg gcc atg gta ttt agc acc aac tcg gcc ctc cat 1152  
ctc acc gag gtg gac gac gcc ggt ccg cgc gac cca aag gac cac agc 1200  
aaa ccc tcc ttt tac cgc ttc ttc ctc gtg ccc ggg acc cac gtg gcg 1248  
gcc aac cca cag gtg gac cgc gag gga cac gtg gtg ccc ggg ttc gag 1296  
ggt ccg ccc acc gcg ccc ctc gtc ggc gga acc cag gaa ttt gcc ggc 1344  
gag cac ctg gcc atg ctg tgt ggg ttt tcc ccg cgc ctg ctg gcc aag 1392  
atg ctg ttt tac ctg gag cgc tgc gac ggc ggc gtg atc gtc ggg cgc 1440

cag gag atg gac gtg ttt cga tac gtc gcg gac tcc aac cag acc gac 1488  
gtg ccc tgc aac ctg tgc acc ttc gac acg cgc cac gcc tgc gta cac 1536  
acg acg ctc atg cgc ctc cgg gcg cgc cat ccc aag ttc gcc agc gcc 1584  
gcc cgc gga gcc atc ggc gtc ttc ggg acc atg aac agc atg tac agc 1632  
gac tgc gac gtg ctg gga aac tac gcc gcc ttc tcg gcc ctg aag cgc 1680  
gcg gac gga tcc gag acc gcc cgg acc atc atg cag gag acg tac cgc 1728  
gcg acc gag cgc gtc atg gcc gaa ctc gag acc ctg cag tac gtg 1776  
gac gag gcg gtc ccc acg gcc atg ggg cgg ctg gag acc atc atc acc 1824  
aac cgc gag gcc ctg cat acg gtg gtg aac aac gtc agg cag gtc gtg 1872  
gac cgc gag gtg gag cag ctg atg cgc aac ctg gtg gag ggg agg aac 1920  
ttc aag ttt cgc gac ggt ctg ggc gag gcc aac cac gcc atg tcc ctg 1968  
acg ctg gac cgc tac gcg tgc ggg cca tgc ccc ctg ctt cag ctt ctc 2016  
ggg cgg cga tcc aac ctc gcc gtg tat cag gac ctg gcc ctg agc cag 2064  
tgc cac ggg gtg ttc gcc ggg cag tcg gtc gag ggg cgc aac ttt cgc 2112  
aat caa ttc caa ccc gtg ctg cgg cgg cgc gtg atg gac atg ttt aac 2160  
aac ggg ttt ctg tcg gcc aaa acg ctg acg gtc gcg ctc tcg gag ggg 2208  
gcg gct atc tgc gcc ccc agc cta acg gcc ggc cag acg gcc ccc gcc 2256  
gag agc agc ttc gag ggc gac gtt gcc cgc gtg acc ctg ggg ttt ccc 2304  
aag gag ctg cgc gtc aag agc cgc gtg ttg ttc gcg ggc gcg agc gcc 2352  
aac cgc tcc gag gcc aag gcg cgg gtc gcc agc ctc cag agc gcc 2400  
tac cag aag ccc gac aag cgc gtg gac atc ctc ctc gga ccc ctg ggc 2448  
ttt ctg ctg aag cag ttc cac gcg gcc atc ttc ccc aac ggc aag ccc 2496  
ccg ggg tcc aac cag ccc aac ccc cag tgg ttc tgg acg gcc ctc ccc 2544  
cgc aac cag ctt ccc gcc cgg ctc ctg tgg acg gac atc gag acc 2592  
atc gcg ttc att aaa aag ttt tcc ctg gac tac ggc gcg ata aac ttt 2640  
att aac ctg gcc ccc aac aac gtg agc gag ctg gcg atg tac tac atg 2688  
gca aac cag att ctg cgg tac tgc gat cac tcg aca tac ttc atc aac 2736  
acc ctc acg gcc atc atc gcg ggg tcc cgc cgt ccc ccc agc gtg cag 2784  
gcg gcg gcc gcg tgg tcc gcg cag ggc ggg gcg ggc ctg gag gcc ggg 2832  
gcc cgc gcg ctg atg gac gcc gtg gac gcg cat ccc ggc gcg tgg acg 2880  
tcc atg ttc gcc agc tgc aac ctg ctg cgg ccc gtc atg gcg gcg cgc 2928

ccc atg gtc gtg ttg ggg ttg agc atc agc aaa tac tac ggc atg gcc 2976  
ggc aac gac cgt gtg ttt cag gcc ggg aac tgg gcc agc ctg atg ggc 3024  
ggc aaa aac gcg tgc cgc ctc ctt att ttt gac cgc acc cgc aag ttc 3072  
gtc ctg gcc tgt ccc cgg gcc ggg ttt gtg tgc gcg gcc tcg aac ctc 3120  
ggc ggc gga gcg cac gaa agc tcg ctg tgc gag cag ctc cgg ggc att 3168  
atc tcc gag ggc ggg gcg gcc gtc gcc agt agc gtg ttc gtg gcg acc 3216  
gtg aaa agc ctg ggg ccc cgc acc cag cag ctg cag atc gag gac tgg 3264  
ctg cgc ctc ctg gag gac gag tac cta agc gag gag atg atg gag ctg 3312  
acc gcg cgt gcc ctg gag cgc ggc aac ggc gag tgg tcg acg gac gcg 3360  
gcc ctg gag gtg gcg cac gag gcc gag gcc cta gtc agc caa ctc ggc 3408  
aac gcc ggg gag gtg ttt aac ttt ggg gat ttt ggc tgc gag gac gac 3456  
aac gcg acg ccg ttc ggc ggc ccg ggg gcc ccg gga ccg gca ttt gcc 3504  
ggc cgc aaa cgg gcg ttc cac ggg gat gac ccg ttt ggg gag ggg ccc 3552  
ccc gac aaa aag gga gac ctg acg ttg gat atg ctg aga ggg gtt ggg 3600  
ggg tgg ggg aac cta gag tcg acc ccg gcg gcc gcc acc atg agc 3648  
aag ggc gag gaa ctg ttc act ggc gtg gtc cca att ctc gtg gaa ctg 3696  
gat ggc gat gtg aat ggg cac aaa ttt tct gtc agc gga gag ggt gaa 3744  
ggt gat gcc aca tac gga aag ctc acc ctg aaa ttc atc tgc acc act 3792  
gga aag ctc cct gtg cca tgg cca aca ctg gtc act acc ttc acc tat 3840  
ggc gtg cag tgc ttt tcc aga tac cca gac cat atg aag cag cat gac 3888  
ttt ttc aag agc gcc atg ccc gag ggc tat gtg cag gag aga acc atc 3936  
ttt ttc aaa gat gac ggg aac tac aag acc cgc gct gaa gtc aag ttc 3984  
gaa ggt gac acc ctg gtg aat aga atc gag ttg aag ggc att gac ttt 4032  
aag gaa gat gga aac att ctc ggc cac aag ctg gaa tac aac tat aac 4080  
tcc cac aat gtg tac atc atg gcc gac aag cca aag aat ggc atc aag 4128  
gtc aac ttc aag atc aga cac aac att gag gat gga tcc gtg cag ctg 4176  
gcc gac cat tat cca cag aac act cca atc ggc gac ggc cct gtg ctc 4224  
ctc cca gac aac cat tac tcc acc cag tct gcc ctg tct aaa gat 4272  
ccc aac gaa aag aga gac cac atg gtc ctg ctg gag ttt gtg acc gct 4320  
gct ggg atc aca cat ggc atg gac gag ctg tac aag tga 4359

Met Glu Thr Lys Pro Lys Thr Ala Thr Thr Ile Lys Val Pro Pro Gly  
1 5 10 15  
Pro Leu Gly Tyr Val Tyr Ala Arg Ala Cys Pro Ser Glu Gly Ile Glu  
20 25 30  
Leu Leu Ala Leu Leu Ser Ala Arg Ser Gly Asp Ala Asp Val Ala Val  
35 40 45  
Ala Pro Leu Val Val Gly Leu Thr Val Glu Ser Gly Phe Glu Ala Asn  
50 55 60  
Val Ala Val Val Val Gly Ser Arg Thr Thr Gly Leu Gly Gly Thr Ala  
65 70 75 80  
Val Ser Leu Lys Leu Thr Pro Ser His Tyr Ser Ser Ser Val Tyr Val  
85 90 95  
Phe His Gly Gly Arg His Leu Asp Pro Ser Thr Gln Ala Pro Asn Leu  
100 105 110  
Thr Arg Leu Cys Glu Arg Ala Arg Arg His Phe Gly Phe Ser Asp Tyr  
115 120 125  
Thr Pro Arg Pro Gly Asp Leu Lys His Glu Thr Thr Gly Glu Ala Leu  
130 135 140  
Cys Glu Arg Leu Gly Leu Asp Pro Asp Arg Ala Leu Leu Tyr Leu Val  
145 150 155 160  
Val Thr Glu Gly Phe Lys Glu Ala Val Cys Ile Asn Asn Thr Phe Leu  
165 170 175  
His Leu Gly Gly Ser Asp Lys Val Thr Ile Gly Gly Ala Glu Val His  
180 185 190  
Arg Ile Pro Val Tyr Pro Leu Gln Leu Phe Met Pro Asp Phe Ser Arg  
195 200 205  
Val Ile Ala Glu Pro Phe Asn Ala Asn His Arg Ser Ile Gly Glu Asn  
210 215 220  
Phe Thr Tyr Pro Leu Pro Phe Asn Arg Pro Leu Asn Arg Leu Leu  
225 230 235 240  
Phe Glu Ala Val Val Gly Pro Ala Ala Val Ala Leu Arg Cys Arg Asn  
245 250 255  
Val Asp Ala Val Ala Arg Ala Ala Ala His Leu Ala Phe Asp Glu Asn  
260 265 270  
His Glu Gly Ala Ala Leu Pro Ala Asp Ile Thr Phe Thr Ala Phe Glu  
275 280 285  
Ala Ser Gln Gly Lys Thr Pro Arg Gly Gly Arg Asp Gly Gly Gly Lys  
290 295 300  
Gly Pro Ala Gly Gly Phe Glu Gln Arg Leu Ala Ser Val Met Ala Gly  
305 310 315 320  
Asp Ala Ala Leu Ala Leu Glu Ser Ile Val Ser Met Ala Val Phe Asp  
325 330 335  
Glu Pro Pro Thr Asp Ile Ser Ala Trp Pro Leu Cys Glu Gly Gln Asp  
340 345 350  
Thr Ala Ala Ala Arg Ala Asn Ala Val Gly Ala Tyr Leu Ala Arg Ala  
355 360 365  
Ala Gly Leu Val Gly Ala Met Val Phe Ser Thr Asn Ser Ala Leu His  
370 375 380  
Leu Thr Glu Val Asp Asp Ala Gly Pro Ala Asp Pro Lys Asp His Ser  
385 390 395 400  
Lys Pro Ser Phe Tyr Arg Phe Phe Leu Val Pro Gly Thr His Val Ala  
405 410 415

FIG. 7A

Ala Asn Pro Gln Val Asp Arg Glu Gly His Val Val Pro Gly Phe Glu  
420 425 430  
Gly Arg Pro Thr Ala Pro Leu Val Gly Gly Thr Gln Glu Phe Ala Gly  
435 440 445  
Glu His Leu Ala Met Leu Cys Gly Phe Ser Pro Ala Leu Leu Ala Lys  
450 455 460  
Met Leu Phe Tyr Leu Glu Arg Cys Asp Gly Gly Val Ile Val Gly Arg  
465 470 475 480  
Gln Glu Met Asp Val Phe Arg Tyr Val Ala Asp Ser Asn Gln Thr Asp  
485 490 495  
Val Pro Cys Asn Leu Cys Thr Phe Asp Thr Arg His Ala Cys Val His  
500 505 510  
Thr Thr Leu Met Arg Leu Arg Ala Arg His Pro Lys Phe Ala Ser Ala  
515 520 525  
Ala Arg Gly Ala Ile Gly Val Phe Gly Thr Met Asn Ser Met Tyr Ser  
530 535 540  
Asp Cys Asp Val Leu Gly Asn Tyr Ala Ala Phe Ser Ala Leu Lys Arg  
545 550 555 560  
Ala Asp Gly Ser Glu Thr Ala Arg Thr Ile Met Gln Glu Thr Tyr Arg  
565 570 575  
Ala Ala Thr Glu Arg Val Met Ala Glu Leu Glu Thr Leu Gln Tyr Val  
580 585 590  
Asp Gln Ala Val Pro Thr Ala Met Gly Arg Leu Glu Thr Ile Ile Thr  
595 600 605  
Asn Arg Glu Ala Leu His Thr Val Val Asn Asn Val Arg Gln Val Val  
610 615 620  
Asp Arg Glu Val Glu Gln Leu Met Arg Asn Leu Val Glu Gly Arg Asn  
625 630 635 640  
Phe Lys Phe Arg Asp Gly Leu Gly Glu Ala Asn His Ala Met Ser Leu  
645 650 655  
Thr Leu Asp Pro Tyr Ala Cys Gly Pro Cys Pro Leu Leu Gln Leu Leu  
660 665 670  
Gly Arg Arg Ser Asn Leu Ala Val Tyr Gln Asp Leu Ala Leu Ser Gln  
675 680 685  
Cys His Gly Val Phe Ala Gly Gln Ser Val Glu Gly Arg Asn Phe Arg  
690 695 700  
Asn Gln Phe Gln Pro Val Leu Arg Arg Arg Val Met Asp Met Phe Asn  
705 710 715 720  
Asn Gly Phe Leu Ser Ala Lys Thr Leu Thr Val Ala Leu Ser Glu Gly  
725 730 735  
Ala Ala Ile Cys Ala Pro Ser Leu Thr Ala Gly Gln Thr Ala Pro Ala  
740 745 750  
Glu Ser Ser Phe Glu Gly Asp Val Ala Arg Val Thr Leu Gly Phe Pro  
755 760 765  
Lys Glu Leu Arg Val Lys Ser Arg Val Leu Phe Ala Gly Ala Ser Ala  
770 775 780  
Asn Ala Ser Glu Ala Ala Lys Ala Arg Val Ala Ser Leu Gln Ser Ala  
785 790 795 800  
Tyr Gln Lys Pro Asp Lys Arg Val Asp Ile Leu Leu Gly Pro Leu Gly  
805 810 815  
Phe Leu Leu Lys Gln Phe His Ala Ala Ile Phe Pro Asn Gly Lys Pro  
820 825 830  
Pro Gly Ser Asn Gln Pro Asn Pro Gln Trp Phe Trp Thr Ala Leu Gln  
835 840 845  
Arg Asn Gln Leu Pro Ala Arg Leu Leu Ser Arg Glu Asp Ile Glu Thr  
850 855 860

Ile Ala Phe Ile Lys Lys Phe Ser Leu Asp Tyr Gly Ala Ile Asn Phe  
 865 870 875 880  
 Ile Asn Leu Ala Pro Asn Asn Val Ser Glu Leu Ala Met Tyr Tyr Met  
 885 890 895  
 Ala Asn Gln Ile Leu Arg Tyr Cys Asp His Ser Thr Tyr Phe Ile Asn  
 900 905 910  
 Thr Leu Thr Ala Ile Ile Ala Gly Ser Arg Arg Pro Pro Ser Val Gln  
 915 920 925  
 Ala Ala Ala Ala Trp Ser Ala Gln Gly Gly Ala Gly Leu Glu Ala Gly  
 930 935 940  
 Ala Arg Ala Leu Met Asp Ala Val Asp Ala His Pro Gly Ala Trp Thr  
 945 950 955 960  
 Ser Met Phe Ala Ser Cys Asn Leu Leu Arg Pro Val Met Ala Ala Arg  
 965 970 975  
 Pro Met Val Val Leu Gly Leu Ser Ile Ser Lys Tyr Tyr Gly Met Ala  
 980 985 990  
 Gly Asn Asp Arg Val Phe Gln Ala Gly Asn Trp Ala Ser Leu Met Gly  
 995 1000 1005  
 Gly Lys Asn Ala Cys Pro Leu Leu Ile Phe Asp Arg Thr Arg Lys Phe  
 1010 1015 1020  
 Val Leu Ala Cys Pro Arg Ala Gly Phe Val Cys Ala Ala Ser Asn Leu  
 1025 1030 1035 1040  
 Gly Gly Gly Ala His Glu Ser Ser Leu Cys Glu Gln Leu Arg Gly Ile  
 1045 1050 1055  
 Ile Ser Glu Gly Ala Ala Val Ala Ser Ser Val Phe Val Ala Thr  
 1060 1065 1070  
 Val Lys Ser Leu Gly Pro Arg Thr Gln Gln Leu Gln Ile Glu Asp Trp  
 1075 1080 1085  
 Leu Ala Leu Leu Glu Asp Glu Tyr Leu Ser Glu Glu Met Met Glu Leu  
 1090 1095 1100  
 Thr Ala Arg Ala Leu Glu Arg Gly Asn Gly Glu Trp Ser Thr Asp Ala  
 1105 1110 1115 1120  
 Ala Leu Glu Val Ala His Glu Ala Glu Ala Leu Val Ser Gln Leu Gly  
 1125 1130 1135  
 Asn Ala Gly Glu Val Phe Asn Phe Gly Asp Phe Gly Cys Glu Asp Asp  
 1140 1145 1150  
 Asn Ala Thr Pro Phe Gly Gly Pro Gly Ala Pro Gly Pro Ala Phe Ala  
 1155 1160 1165  
 Gly Arg Lys Arg Ala Phe His Gly Asp Asp Pro Phe Gly Glu Gly Pro  
 1170 1175 1180  
 Pro Asp Lys Lys Gly Asp Leu Thr Leu Asp Met Leu Arg Gly Val Gly  
 1185 1190 1195 1200  
 Gly Trp Gly Asn Leu Glu Ser Thr Arg Ala Ala Ala Thr Met Ser  
 1205 1210 1215  
 Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu Leu  
 1220 1225 1230  
 Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu Gly Glu  
 1235 1240 1245  
 Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys Thr Thr  
 1250 1255 1260  
 Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe Thr Tyr  
 1265 1270 1275 1280  
 Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln His Asp  
 1285 1290 1295  
 Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg Thr Ile  
 1300 1305 1310  
 Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val Lys Phe  
 1315 1320 1325

Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile Asp Phe  
1330 1335 1340  
Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr Asn  
1345 1350 1355 1360  
Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly Ile Lys  
1365 1370 1375  
Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val Gln Leu  
1380 1385 1390  
Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro Val Leu  
1395 1400 1405  
Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser Lys Asp  
1410 1415 1420  
Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val Thr Ala  
1425 1430 1435 1440  
Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys  
1445 1450

FIG. 7D